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ORIGINAL ARTICLES.

PROPHYLAXIS IN INFECTIOUS DISEASES OF CHILDREN.

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"Vincit amor patriæ."—*Virgil.*
"The noblest motive is the public good."

A part of pathology forms etiology, the science of causes of diseases. It employs itself with pathogenetic facts, which it seeks for in the organism, the disposition of disease, and the surroundings. As etiology originates from physiology and chemistry, so prophylaxis from etiology. Have we discovered the causes of the disease? Then the idea impels us to immediately obviate the causal movements of the disease to prevent the origin of sufferings. From Egyptian scriptures, Indians and Greeks even, we observe were penetrated with the thought:—"It is easier to prevent a sickness than to cure one already rooted." And has not Moses been unrivaled as the hygienic law-giver for centuries.

Prophylaxis and hygiene go hand in hand, and are cardinal points in medical, pedagogical and moral activity. In epidemic diseases prophylaxis is most essential. Through combined actions of different causes, epidemics originate. Many of the causes we may, by our knowledge, destroy.

In typhus, diphtheria, measles, scarlatina, cholera, pest, etc., a rational prophylaxis is most valuable. It conditions the preservation and welfare of one individual as well as of entire families.

Ever since we have been familiar with the original causes of most epidemics, their horrors have been greatly lessened to humanity. In ancient times, in the middle-ages, and even in our enlightened time, some persons have the idea that the origin of epidemics is due to supernaturalism and diabolism. The Old Testament teaches us that Jehovah wandered through Egypt during the night and slew each first-born. He also commanded Moses and Aaron to strew soot in front of Pharao, after which should appear "malignant black smallpox."[1]

Into the Assyrian King Sankerib's army that besieged Jerusalem, Jehovah sent the avenging angel to protect his chosen city from its enemies. In the

[1] In the original text it is named the Egyptians' visiting plague: "Schechin ababuoth poreach"; what the Septuagint translated with ἑλκηψλυτίδες; Luther with „böſe ſchwarze Blattern," the malignant black small-pox.

Iliad, Apollyon is the bearer of the plague. During the pest in Athens, the Delphic oracle enjoined the sacrifice of a ram to the rising "Helios." Plagues seemed to be of supernatural origin, and were deemed to come upon man by the immediate will or command of some God.

In the course of centuries nothing changed this superstition. From the heathen and Jewish antiquity it entered Christianity, and in the middle-ages special saints were believed competent to avert special plagues. For instance, Saint Genoveva and Saint Martial were invoked for the cessation of the epidemic which was caused by eating poisonous bread, baked of flour which was made of ergotized grain. In place of propitiatory sacrifices, Christianity has castigations, processions, distributions to churches and monasteries. During the sixteenth century epidemics, many persons renounced the world entirely, and retired to lonely mountains to lead a hermit life. In 1350, when the "Black Death" raged in Lübeck, the frightened citizens (that they might be spared this danger) brought all their money and valuables to the churches and monasteries. When the monks would accept no more they threw it over the monastery walls. Numberless crowds of people traveled about silently, or sang penitential psalms. Half-naked, and in streams they passed through towns and villages and went to churches, where, prostrated before the altars of martyrs they flagellated themselves. Mortifications, propitiatory sacrifices, processions, pious offerings and recipies could not check the devastation made by the plague, much less had they any prophylactic worth. Many went astray in their religion, and then, out of the wantonly sprouted weeds of superstition grew a new poison, comparable to the poison of the disease, wherewith young and old, high and low, wise and fool, were equally infected. Myriads were accused of witchcraft; were cruelly tortured and put to death. In consequence of such accusations the Jews suffered horribly. Thousands were stretched on the rack who, by insane mobs, were said to have spread the pest through poisonous salves and powders, and to have poisoned the fountains.

Even in our enlightened times, a few years since, during the cholera epidemic in Spain, physicians were accused of spreading the disease, and under difficulties had to flee the infuriated, fanatic mob. The influenza, which has numberless times decimated the nations in great pandemics on its march from North-east to South-west, was vindicated as coming from a mystic source. According to Santopadre, we find an intimation of this disease in the Pentateuch.[2]

The history of epidemics, notwithstanding, abounds in examples of self-denial, courage and the highest philanthropy. Countless physicians and priests have, during these epidemics, faithfully done their duty and have offered up their lives. Yet even in early times, physical science did endeavor to trace the sources of the epidemic disease. If once we know the cause of the disease, hope may be entertained that we will succeed in destroying the cause, and with it the disease itself. This is the natural and logical road to healing.

Pharao allowed the children of Israel to wander home; Sankerib raised the siege of Jerusalem; the Achaiens before Troy, washed themselves clean and threw all things polluted into the sea. Now, we know that all infectious diseases originate in organisms which belong to the lowest and smallest forms of living beings, standing on the verge between the animal and vegetable kingdoms, so we are able by prophylactic and hygienic means to prevent the penetration and the absorption of schizomycetes in the human organism. Prophylaxis is and will remain the chiefest principle, showing us such remedies and ways as will prevent those bacteria, vibrios, zoögloes, spirilla, etc., from entering our body, which, as immigrants, as well as by producing ptomaines, may cause specific sickness.

The infectious diseases of children is the especial concern of this article, with the object of developing those which are the most serviceable hygienic measures, if not to totally destroy, at least to effectively control these dreaded and decimating epidemics.

To successfully establish prophylaxis

[2] *Trattatodi Patologia Speciale Medica e Terapia*, pel Dott Temistocle Santopadre, Ferrara, 1895, pag. 785: "Nelle sacre pagine del Pentateuco, si tennegia menzione di questo vero Proteo, che assumendo svariatissime forme, sbuco anche esso dal malangurato vaso di Pandora, per ghermire e travagliare le umane generazioni. Questa influenza fu conosciuta fino dai tempi d'Ippocrate."

against disease, it is necessary to be acquainted with epidemiology — the causes and propagating agencies of an epidemic. Only through this can we successfully attack the enemy at his most dangerous and strongest points, and perforate his phalanx.

The cardinal points of prophylaxis against infectious diseases are: Utmost cleanliness, regular and appropriate nourishment, avoidance of the sick-room, isolation of the sick, light, fresh air, disinfection, and, if possible, destruction of all infected matter and of excrement. Such as are afflicted with infectious disease must be removed from contact with the healthy, or *vice versa*. Especially with children is the operation often easily accomplished. The sick-room, by proper ventilation, should be freed from the concentration of poisonous matter. The astonishing results produced in surgery by the successful antiseptic treatment of infected wounds, have pointed attention to prophylaxis in other infectious diseases. But the antiseptic principles which secured such eminent results in surgery have, to our regret, not yet fulfilled expectations in internal medicine. The reason is easily comprehended, because it is impossible to protect all entrances to the animal organism against the penetration of infectious germs. Only when we succeed in giving the lungs sterilized air and conveying food free from all pathogenic microorganisms to the digestive organs, can we attain absolute safety against infection. A healthy organism is, without these precautions, nearly always capable of destroying those infectious accidentally admitted germs, and can eliminate and win the fight against the invading enemy. Where the infectious germs have secured position in a weak body, with weakened vital tissue-cells, they will conquer, and taking possession of the field, will achieve their devastating purpose.

Sagacious researchers have tried to produce immunity through vaccination, which has so brilliantly proved its efficacy in variola. Whether antitoxine will justify itself in the treacherous disease, diphtheria, or whether it will be a second fiasco, *a la* Koch's "tuberculin," the future will have to reveal. Should this procedure really overcome the virulence of diphtheria, or even stifle its germs, this discovery will be epoch-making, and the most blessed invention *fin de siècle*. Serum-therapy seems to gain favor with experience, which speaks in praise of its effect. Public statistics show good results.[4] Dr. Monod has laid before the French Academy of Medicine some interesting statistics concerning the decrease in the mortality caused by diphtheria since the introduction of Dr. Roux's method of treating the disease by subcutaneous injection of serum. It was in January, 1895, that the use of the serum may be said to have commenced. In one hundred and eight French towns, with a population exceeding 20,000, the average number of deaths from diphtheria which had occurred during the first six months of the seven years previous to 1895 was 2,627. During the first six months of 1895 the number of deaths from diphtheria was 904, which is equivalent to a decrease of sixty-five per cent. in the mortality caused by that disease.

The infectious matter of diphtheria, scarlatina, measles and whooping-cough are of mykotic nature, and once we have some approved remedies against these disease-producing germs, then thousands and thousands of little children will be spared untimely death.

The lack of some really reliable remedies is the reason why, in contagious disease, a strict and well-regulated prophylaxis is of such eminent value and, often, of complete success. According to the virulence of the infectious germs, and the age and mode of life of those exposed, susceptibility to contagion varies. Climatic and telluric conditions, as also certain seasons of the year, are, for an accurate genesis of disease, to be taken into consideration. Badly-drained and marshy grounds; over-crowded living in musty dwellings where sunshine and fresh air never enter; filth, in consequence of which concentration of miasms or noxious

4 Dr. V. Imerval, in "*Le Bulletin de la Societe des Medecine et des Naturalists de Tassy*," No. 2, 1895, page 53, says: "Les experiences faites par Roux Behring et Aronsoni ont 'etc'., couronnecs de succes. Roux a traite a l'hopital des Enfants-Malades, 448 enfants attents de diphterie confirmee par l'examen bacteriologique chez 300 d'entre eux; la mortalite a 'etc' reduite a 24.3 per cent. A Berlin Aronsonia injecte du serum prepare par lui (qui est trois fors plus fort que le serum Behring) 192 enfants attaints de diphteric constatee par l'examen bacteriologique; la mortalite a 'etc, de 11.2 per cent., tandis qu'auparavant et dans le meme hopital elle montait a 32.-41.8 per cent."

effluvia takes place; these all are prolific foci for germ propagation, are factors which highly promote the rapid progagation of infectious diseases, and give an intensity for far more terrible effects.

In diphtheria the susceptibility is extraordinary. The infection long preserves its ability to germinate. It may, for a long time, adhere in dwellings to furniture or other articles, then, through some incident, be taken into the human organism to begin again its dismal work. Houses wherein diphtheria patients have been confined, as also every article with which they have come in contact, must be disinfected with the utmost care. The patient's room must be thoroughly ventilated to avoid the concentration of poisonous matter. This fact must constantly be kept in mind, that the contagion of diphtheria may be conveyed from the sick to the healthy by any article with which the patient has been in contact. That milk can serve as medium for transferring diphtheria bacilli has been proved. Especially in England, hygienists and bacteriologists have studied this question most minutely. The observation has been confirmed that diphtheria, as well as scarlet-fever and typhus, can be transmitted to healthy persons through infected milk. Long known is the fact that milk from tuberculous cows is dangerous. The diphtheria epidemics which in 1878 raged in the northern part of London; in 1886 in Yorktown and Chamberlain; and in 1888 in Enfield and Barking, confirmed the suspicion of milk having the capacity to convey the diphtheritic virus. Dr. M. Klein tested this matter thoroughly. He injected subcutaneously diphtheritic virus into cows. The following day the vaccinated cows took sick, fever set in, no appetite. A tender and very painful swelling formed at the place where the injection had been made. By the eighth day the swelling had developed to the size of a fist. In the course of two weeks the cows began to cough, and at the udder appeared a pustular eruption which contained the Loeffler-bacillus. The milk of these cows contained diphtheria bacilli in pure state. In the feces, also, were found numerous diphtheria bacilli. Fourteen cats fed with milk from these cows presented all the symptoms of diphtheria, and died in a few days.

Likewise, milk from healthy cows can play the role of carrier in spreading the disease, especially if such milk be gotten from a household where diphtheria is present. Dr. Jonsberg, in *Norsk Magaz. f. Latgevidenskalen*, tells some very interesting instances of such transferral. From the 15th of May to the 26th of August he treated sixteen patients in the Diphtheria-Lazareth Kabelvaags. During the month of May he had ten cases of diphtheria; six of these were inmates of one house. During June, July and August he treated two cases each month. All of the above patients drank milk which came of one and the same household, wherein lived a girl who suffered with a malignant sore throat. The milk served by that family where the patient suffered with severe diphtheria was found to be the only traceable source of the infection. Birds and cats may become dangerous carriers of diphtheria. In homes wherein diphtheria prevails, it not infrequently happens that canary-birds suddenly sicken and die of the disease. Dr. Davis reports in the *British Medical Journal* nine cases where the direct infection of children was caused by sick fowls. In the *Medical Age*, Dr. Laurence describes a case which was the source of an epidemic—a child who had not been in contact with any diphtheria patient, but had nursed a cat which had a sore throat. The cat was examined, and abundant membranes found in its throat. Dr. Scott, also, observed three children and their mother taken ill with diphtheria. They had been nursing a sick cat with membranes in its throat, and he excluded all other sources of infection.

The mortality from and the susceptibility to diphtheria is greatest between the ages of one to five years. Later, this disease becomes less frequent and the mortality considerably decreases.

In measles, susceptibility is very general, as is proved by the widely raging epidemics. In the past twenty years measles has been remarkably prevalent in England and Wales. The reason for these epidemics was not wrongly attributed to the greatly increased school attendance, although the school-houses received no alteration nor enlargement,

and the school-rooms were badly ventilated. During school hours the children were overcrowded in unsanitary quarters and compelled to breathe foul air. These are the chief reasons that the danger of contagion among school children is greatly increased.

The epidemiology of measles has been almost precisely settled in the present time. The infectious germs are of but short duration. A continual contagion through localities, articles, clothes, etc., is not to be feared. After the disease has terminated, the continuation of disinfecting procedures is useless. The incubation period, from the beginning of the infection until the eruption of the exanthem, lasts, as a rule, thirteen to fourteen days. Exceptionally it lasts only twelve days. By the diminished susceptibility acquired by previous infection, the incubation period may extend from eighteen to twenty days. The contagion is transmissible three or four days before the eruption appears. Children associated during the incubation period, generally become infected two or three days before the eruption of the exanthem on the child first diseased. Between the eruption on the infecting individual and the infected, is a lapse of eleven days. The contagion of measles is so powerful that a child already infected can, if brought in contact with other children during the incubation period, infect them all.

Prophylaxis against measles is difficult during the prodromal stage, on account of the strength of the contagion. The principle of isolation generally comes in play too late, although it often can considerably modify an epidemic of this disease. The disposition to acquire this disease is greatest between the ages of five to ten years. Concerning the mortality. From the first to the fourth year is life the most endangered. During the school years the mortality of uncomplicated measles is very small.

Susceptibility for scarlatina is not so general as for measles. As age increases liability becomes less, and the danger diminishes. Overcrowded tenement houses, foul air, musty dwellings, insalubrious quarters; all tend to favor the extension of this disease. Dr. E. P. Hersley found that at least 70 per cent. of the cases of this disease occurred through school children coming in contact with other and infected children. As in diphtheria, so in scarlatina, the infection can be conveyed by cats. Dr. F. B. Hamilton reports in the *British Medical Journal*, June 3d, 1894, a case which occurred during the Dublin outbreak. Two children of a family living in the suburbs of that city contracted scarlet-fever. The children were isolated in the upper part of the house, and the best sanitary precautions were taken to prevent the spread of the disease. At the end of two weeks the children were convalescent, but now, children living in the basement of the house took the same disease. It seemed impossible to find the mode of the infection. Hamilton observed a cat in the bed with the convalescents, and on further investigation he discovered the same cat playing with the children in the basement. To this cat he attributed the spread of infection.

The contagion of scarlatina, unlike that of measles, can keep its virulence very long, and is easily transmitted by any articles to which it may adhere, such as tools, garments, utensils, food, and domestic animals. Prophylaxis requires the washing of such patients with carbolic acid solution, and a fifteen per cent. hydronaphthol soap. This procedure is beneficial. It causes earlier desquamation and destroys the virulence of the germs which are found in the separating scales of the skin. This antiseptic washing prevents the air and surroundings becoming impregnated with the infection, and the danger of contagion becomes less for others of the family. Antiseptic washing thrice daily from the beginning of desquamation and continuing for one week, is sufficient.

Another frequently occurring epidemic, and in many cases a neglected disease of children, is tussis convulsiva. It most frequently occurs between the child's second and seventh years. General indigestion and weakness, badly ventilated rooms, and over-crowded living increase the danger of contagion and the difficulty of controlling the disease. The carriers of all the aforenamed diseases are found in the expectoration, in in the secretions from the mucous membrane of the nose, mouth, throat, larynx, trachea and bronchi, and the conjunc-

tiva of the eye. In diphtheria the infectious germ often occurs about the female genitals. In measles and scarlet fever, the infection carriers are the epidermic scales of the entire surface of the body, which, after the termination of the efflorescent stage, loosen themselves in various forms, from that of fine dust to that of tattered skin pieces.

The mycrotic germs of all these ailments are to be found upon the entire surface of the body, on bed-clothing, garments, furniture, carpets, curtains, floors, utensils, rather than suspended in the air. With each forcible cough in measles and tussi convulsiva, innumerable infectious germs are cast into the air but, contained in the secretions from the mucous membrane, they soon drop. So that the air in the sick-room is almost free of germs if particles of dried-up secretions from the floor or from other articles, are not mechanically whirled into the air.

What rational prophylactic methods can we apply in these diseases of children? The first and principal action is the isolation of those already sick. If we can isolate the source of infection, namely the patient, so that a further spread during the limited illness cannot take place, then the disease will remain local. In measles and tussis convulsiva the virulence of infection disappears after the fever subsides, with the completion of desquamation and the cessation of the spasmodic cough. In most cases the contagion is directly from the diseased to the healthy. Accordingly the best prophylaxis is a careful isolation of the patient, though often such isolation is very difficult to accomplish.

The diagnosis of measles is difficult before the eruption, especially if no preexisting cases were known. Generally the infection of other children has taken place before we know what disease we have to combat. In such case the isolation generally comes too late.

Tussis convulsiva patients are also difficult to isolate on account of the long duration of the disease. Even in hospitals, during great epidemics, the segregation of the diseased is not easily accomplished for lack of space. In tenement houses it is simply impossible to find sufficient room to seclude the patients. Parents and friends of the sick constantly spread the disease further. Especially through schools, the most rapid spreading of contagion occurs. The closing of schools during such epidemics is good, but this proceeding generally comes *post festum* in practice; that is, after most of the children have been in contact with the infected, which, in measles, is generally the case.

Rational prophylaxis is by far more difficult in scarlatina and diphtheria than in measles and pertussis. Here, not only the patient spreads the infectious germs, but the germs also adhere with extraordinary tenacity to different articles which have been in contact with the patient. These germs keep their virulence for months, yes, even years. Dr. A. B. Duffin, of London, tells of a case of scarlet-fever which occurred in a room of a tenement house, where the walls had been repapered several times without removing any of the original paper. A family moved into the house, and removed all the layers of paper. Thus was liberated scarlet-fever poison, causing an outbreak in the family.

The only successful prophylaxis for all these diseases is the destruction of the germs. The principal thing is to thoroughly disinfect the surface of the entire body where, generally, the most infectious matter is deposited. The skin must, at least thrice daily, be washed with Potash soap. Ordinary Potash soap is preferable to any other antiseptic soap, as the latter can in no way be applied in sufficiently concentrated form. The skin of children is very sensitive to carbolic acid, hydronaphthol and other antiseptics, and applying these three times a day, may easily produce toxic symptoms. The surfaces of nose, mouth and ears, as well as the face, must be thoroughly rubbed with soap and then washed in warm water. To wipe the parts, clean old linen should be used and then be burned. A mosquito-net in tent shape may be put over the bed wherein the patient lies, to limit further dissemination of the infectious germs. On the netting, masses of these germs will adhere, hurled there through expiration and spasmodic cough. Bed clothes and clothing should be often changed. Sheets and clothing once used, must be

soaked in two per cent. carbolic acid solution or in two per cent. chloride of lime solution, for several hours in the sick-room. Later on by washing and boiling all germs will be destroyed. Absolutely nothing should be in the patient's room save the most necessary articles and utensils. The room must be kept perfectly clean, and should be thoroughly ventilated each day. Daily, the floor and walls should be mopped with clean water and soap. Cats and dogs must be kept out of the sick-room. After termination of the illness, the room is to be fumigated with sulphur (to every 1000 cubic feet, 3 lbs. sulphur is sublimed), and thoroughly aired for a number of days. A strict rule must be enforced that only nurses be allowed to enter the room. After leaving the room and before coming in contact with other persons, nurses should wash the face and hands perfectly with soap and water. Older children should not expectorate into handkerchiefs, but into suitable cuspidors containing disinfecting fluid. The attending physician must have strict supervision over the cleansing and disinfection. He should always take care for hygiene in the household and, in those families who have not sufficient seclusion for the healthy children, he should, if possible, provide quarantine for the sick.

Another very important point is the compulsion by law of notification of such diseases. Parent, physician, teacher and the police ought, under penalty, be bound to report such diseases. By such means only can the Sanitary Inspector take the requisite measures to energetically and effectually suppress a threatened epidemic. Bed clothing, mattresses, woollen goods, garments, etc., should be cleaned in public disinfecting institutions. Kindergartens, schools, etc., should constantly be superintended by a physician. Children who are suspected of being in the prodromal stage of diphtheria, scarlatina, measles or whooping-cough, should be strictly kept away from these places. Likewise should be excluded healthy children, whose brothers or sisters may be infected with any of these maladies.

Should any of the aforesaid diseases become epidemic, institutions attended by children under the age of seven must immediately be closed, as it is known that the susceptibility and mortality of measles, diphtheria and scarlatina is the greatest among children of such age. Each school and institution should be under constant observation of an experienced physician.

If we accomplish these points, which belong to rational prophylaxis, good results, certainly, cannot fail.

Before saying more about the new woman it might be well to pay respects to the "old" man for there are a good many of him left over. It is he who picks up his wife's glove in public and allows her to lift the coal hod in the privacy of home; he keeps the tickets and money for both when travelling; he keeps her in ignorance of his income and scolds because the family expenses do not correspond. He believes that a woman should know nothing of business and takes pains that she has no opportunity to learn; he laughs if she loses or is cheated "just like a woman" but keeps his own counsel when his own dividends fail or notes go to protest. The old-fashioned man had a veneer of gallantry that was all right but it didn't quite cover everyday living.

I prefer the man who keeps his feet on his desk, his hat on his head and his cigar in his mouth, if he gives me the same attention that he would grant to a man upon a similar business errand, to the man who addresses me as "my dear lady," sets out a chair with extra flourish, smiles patronizingly and talks softly. Between these are the true gentleman of the business world.—*N. E. Farmer.*

DR. PILLS.—"Who was the most successful of all those girls who were studying medicine with you?"

DR. SQUILLS.—"Miss Ketchem; she got married.—*Harper's Bazar.*

MOTHER.—"I can't see how it happened that that Kechem girl out of all your 'Chafing-Dish Club' managed to get that attractive Mr. Merriman. All the rest of you girls are so much brighter and prettier. Didn't you tell me she scarcely ever spoke a word?"

MAUD.—"Yes, mother; but she did the cooking."—*Harper's Bazar.*

ABDOMINAL WORK IN A GENERAL HOSPITAL.

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The nine operations here reported are not selected cases, but comprise the entire number of abdominal sections performed at the Delaware Hospital during a three months' service, from July 1 to October 1, 1895.

CASE I.—M. B.; American; female; age, sixteen years; single; domestic; was admitted July 12, 1895. The patient had been under the care of Dr. Ball, of Hockessin, for some months, receiving medical and local treatment for irregular menstruation and dysmenorrhea. Her mode of living and surroundings had been such as to excite suspicion of specific disease, but no such history could be obtained from the patient. Examination disclosed the abdomen somewhat enlarged and tender, especially in the ovarian regions. The cervix was well down in the vagina, large and inflamed. The tubes and ovaries were enlarged, and indicated the presence of pus.

Operation, July 25th. Both appendages removed through a two and one-half inch median incision. The ovaries were enlarged and cystic, and the tubes, markedly degenerated, were filled with cheesy debris. Recovery was complete, the patient being discharged August 10th, sixteen days after the operation.

CASE II.—C. A.; American; male; age, fifteen years; school-boy; was admitted July 20, 1895. He was a patient of Dr. H. R. Spruance, at whose office he had, four days before, applied for treatment for general abdominal pains somewhat intensified about the umbilicus. Next day he was confined to his home, the pain having grown worse and become localized in the right iliac fossa. Treatment by salines aggravated the symptoms, and at the end of twenty-four hours a fluctuating tumor could be detected in the right iliac region. The diagnosis of suppurating appendicitis was made after consultation with Drs. Ogle and Stubbs. Immediate operation being advised, the patient was removed to the hospital and operated upon the same day, the temperature at the time being 104°F. A two and one-half inch incision was made approximately parallel to Poupart's ligament. There were extensive adhesions about the head of the colon and a sac containing four ounces of muco-purulent matter. The appendix was about one inch in length, with thickened walls, and so completely degenerated that it was necessary to pass a number of sutures through the stump. It contained a common No. 1 pin, the head in the distal end of the appendix and the point extending to the opening into the bowel. After operation the temperature fell, and recovery followed, the wound healing by granulation. No history could be obtained of the ingestion of the pin. The patient was discharged twenty-seven days after operation.

CASE III.—H. N. M.; female; age, thirty-five years; single; domestic; was admitted to the hospital August 8th. She was a patient of Dr. J. B. Stubbs, from whom was learned the following history: For months she had been subject to attacks of pain in the stomach, occasionally followed by nausea and vomiting, headache, pain in the back, tympany and extreme tenderness of the abdomen. These attacks were aggravated at the menstrual periods, and were becoming more frequent. Examination disclosed uterus, tubes and broad ligaments enlarged and matted together by adhesions. Diagnosis was septic peritonitis, repeated attacks of which had caused degeneration of the entire pelvic viscera.

Operation, August 19th. Double ovariotomy. Upon opening the abdominal cavity there was an escape of extremely offensive gas, the odor of which was sickening. The contents of the pelvis were so completely degenerated that it was difficult to distinguish the various organs. The left ovary was found completely detached. Adhesions were broken up and the cavity irrigated with several gallons of hot sterilized water.

It was impossible to close the wound under strict antisepsis, and primary union failed at some portions. A sinus was formed, which discharged for several days and, becoming connected with the small intestine, resulted in a fecal fistula. This sinus closed completely by granulation. Patient was discharged October 9th, entirely recovered.

CASE IV.—A. R.; American; female; age, twenty-five years; domestic; admitted to the hospital August 18th; was the patient of Dr. Elbert, who gave the following history: She had repeated attacks of salpingitis and ovaritis during two years preceding. Menstruation was attended with great suffering. The condition had been growing constantly worse up to the date of her admission to the hospital.

Operation August 21. A cyst of the left broad ligament, including the ovary, was removed, adhesions broken up, and the abdomen closed. Recovery was complete and the patient was discharged September 12.

CASE V.—A. B.; female; aged 30 years; married; housewife; was admitted to the hospital August 22. She gave a history of a number of attacks of appendiceal inflammation, recurring at short intervals, with an extension of the inflammation throughout the pelvic cavity. Through a median incision, was removed the appendix which, elongated and inflamed, had twisted backward under the cecum. The right tube and ovary were also removed, being in a condition of purulent inflammation. Recovery was rapid and complete, the patient leaving the hospital September 13.

CASE VI.—I. L.; female; age 35 years; married; three children; housewife; patient of Dr. Ball; was admitted August 27. She had been subject to excessive flooding at the menstrual periods, the attacks increasing in severity until, at the time of her admission to the hospital, the hemorrhage could be controlled only by tamponing uterus and vagina. She was profoundly anemic. She gave a history of numerous attacks of ovarian trouble on the right side; and of an operation, performed some time since at the Hahnemann hospital, the nature of which she did not know. There was no evidence of laparotomy having been done.

Operation August 31. The right appendages were removed. The left ovary could not be found; it, probably, had been removed *per vaginam* at the operation mentioned. Recovery was complete, and at the time of leaving the hospital, four weeks after operation, the patient had had no return of her former symptoms.

CASE VII.—M. S.; Pole; male; age 27 years; iron-worker; was a patient of Dr. Spruance, to whom he had applied for relief for abdominal pain, the result, he believed, of an injury received while working. A satisfactory history could not be obtained because of the patient's inability to speak English. It was finally ascertained through an interpreter that the pain was localized in the right iliac region. Notwithstanding medical treatment, a fluctuating tumor developed in this region with the usual symptoms of suppurating appendicitis. Immediate operation being deemed necessary, the patient was admitted to the hospital September 11, and operated upon the same day.

In a cavity containing five ounces of exceedingly offensive pus and fecal matter, it was found that the appendix had sloughed off leaving a fistulous opening between the cecum and the pus cavity. Owing to extensive adhesions the pus sac could not be removed, and after closing the fistula, irrigating with sterilized water and draining by means of iodoform gauze, the wound was closed. Subsequently there was a free discharge of pus, the amount gradually diminishing and the wound healing by granulation. The patient was still in the hospital at the expiration of my service, October 1st. He was discharged November 2d.

CASE VIII.—M. K.; age 55 years; married; three children; housewife; a patient of Dr. Spruance; was admitted to the hospital September 25. For a number of years she had been treated by various physicians for what she said was called rheumatism. Examination disclosed a tumor in the pelvis, the exact nature of which could not be determined because of the intense pain caused the patient, but the diagnosis lay between a fibroma and a dermoid cyst. Operation determined it to be the latter. In the left broad ligament was a mass weighing

about ten pounds. It was tapped with a trocar in order to reduce the size, and several ounces of thick gelatinous matter was drawn off. The pedicle had strangulated by a complete twist about itself. In addition to the semi-fluid, the cyst contained a quantity of hair, several teeth, and some fragments of bone. Recovery was rapid and complete, the wound healing by primary union. The patient was discharged October 9th, thirteen days after the operation.

CASE IX.—H. A. C.; female; age 64 years; domestic; patient of Dr. Jakes; was admitted to the hospital September 26. For a number of years she had suffered with pain in the lower abdominal regions, which had increased in severity until she was incapacitated and scarcely able to move about. The patient was so fat that external palpation was practically useless. Digital examination discovered the vaginal vault completely choked by an adherent mass which had crowded the uterus down into the passage.

Operation September 27. There was a deposit of adipose tissue one and one-half inches thick between the skin and the muscular wall. Penetration of the peritoneal cavity presented a dense, tough tumor attached to the uterus. The entire mass was so firmly coherent and adherent to the adjacent parts as to compel hysterectomy and the use of the serre neude, which was removed at the end of ten days. The tumor was an osteo-fibroma, calcified to such an extent that it required the saw to cut through it. The patient recovered and, after five weeks, was discharged November 4, 1895.

These cases have recently been reported elsewhere by my assistant, Dr. H. W. Briggs.

THAT HORRID NARCOTIC.

The late Doctor Thomson, Archbishop of York, was a tall, stout man, with a remarkable head. When as a young man, residing at Oxford, he married Miss Zoe Skeen, the daughter of a Scotch father and a Greek mother, they were pronounced the handsomest couple Oxford had seen for many a day.

When Doctor Thomson was Bishop of Gloucester, he suffered from toothache, and by medical advice, he resorted to narcotics to relieve the pain. One morning, after a night of great suffering, as he left the house to consult the doctor, Mrs. Thomson begged him not to allow the physician to prescribe a narcotic, as it affected his brain for several hours after taking it.

On his way the bishop met the postman, who handed him a large official envelope. He opened it in the street, and read his appointment to the See of York. Instead of visiting the doctor he hastened back to communicate the surprising news to his wife.

"Zoe! Zoe!" he exclaimed, "what do you think has happened? I am Archbishop of York!"

"There, there!" rejoined the wife "What did I tell you? You've been taking that horrid narcotic again, and are quite out of your head."

The Scotchman's disposition to regard his own judgment as the best that can be found is well illustrated in a story once told of a moderator of a Scotch Presbytery.

This man's opinion differed widely on a certain question relating to church discipline from that of the associates with whom he was ostensibly consulting. At last he said that he would lay the matter before the Lord in prayer, and then wait for His guidance.

"O Lord," said the moderator fervently and with perfect sincerity of purpose, "O Lord, grant that we may be right in this matter, for Thou knowest that we are *very* decided."

JUDGE.—Were you ever up before the court?

TRAMP.—Can't say, Judge. What times does Your Honor get up?—*Spare Moments.*

COMMUNICATIONS.

USE OF HOT WATER IN SURGERY.*

DR. PAUL RECLUS, PARIS, FRANCE.

I shall confine myself in this lecture to the use of hot water in sprains, prostatitis, and inflammation of the internal female genital organs, that is to say, perimetro-salpingitis.

I have, on previous occasions, described my treatment of sprains, which, however, still appears not to be generally known, although more rapid and complete recovery is obtained by my method than by the usual treatment, which, as is well known, consists of massage, wrapping the affected joint in a rubber band, or prolonged bathing with cold water. I have combined these three measures, with decided benefit to the patient, which is evidenced by the fact that I have had upwards of thirty serious cases of sprain, where recovery was obtained by this means within from four days to a fortnight.

It is unnecessary to describe the manner of applying the massage or the elastic band, as this is a very simple matter; as, however, this band is the principal thing in the treatment, it is kept on until recovery is obtained. Morning and evening, however, it is removed and the hot-water treatment resorted to. For this purpose, the sprained joint is plunged in a bath, the temperature of which is gradually raised from 48° to 50° or 52°, and even 55° C. (118° to 130° F.), which I consider high enough. Under the influence of this heat the pain ceases immediately in a most remarkable manner. The circulation, and perhaps also the nutritive faculty, becomes more active, and to this fact doubtless a large share of the more rapid absorption of the peri-articular effusion must be attributed.

In addition to hot water I also use massage, which, like the elastic bandage, favors absorption of the effusion. The bandage has the advantage over massage in that its action is continuous, but it cannot dislodge clots. This is accomplished by energetic "kneading" with the fingers, which dissipates the peri-articular infiltration, thus preparing the way for the elastic bandage. My treatment of sprain, therefore, consists in the use of water at a temperature of 55° C., massage, and the application of an elastic bandage. Unless the lesion is exceptionally severe, recovery will be obtained by this means within a fortnight.

The manner in which I treat extensive traumatisms of limbs by conservative methods I have recently described before the French Congress of Surgery. Whatever the extent or gravity of the lesions, I never, under any circumstances, amputate the injured limb, but merely wrap it in antiseptic substances by a veritable "embalming" process, leaving Nature to separate the dead from the living tissues. This method of treatment possesses the double advantage of being much less fatal than surgical procedure, and of preserving for the use of the patient, if not the entire limb, at any rate, a much larger part than would be left after amputation.

I should not have the courage, however, to advocate this uncompromisingly conservative treatment, were it not for the excellent effects of hot water, which I use freely in the following manner: The patient, who is almost invariably in a state of collapse from the shock, is placed on the operating table, where he is wrapped in hot blankets, only the crushed limb being left exposed. The skin of the latter is shaved, all fatty substances are removed by the aid of ether, alcohol, or potassium permanganate, and when this preliminary disinfection has been thoroughly done, the injured parts are carefully cleansed.

*Abstract of a clinical lecture delivered at the Pitie Hospital.

The principal agent employed for this purpose is hot water from a cistern, placed at a sufficient height above the bed to insure a forcible jet. The temperature of the water should be between 60° and 62° C. (140°–145° F.), but not higher, for, if it should reach 64° C. (152° F.), the heat would be sufficient to alter the albuminoid constituents of the tissues. This jet of hot water is made to irrigate all the injured surfaces, and to penetrate into all the hollows of the wound. This is the only way of removing all clots, and washing away foreign bodies, together with the micro-organisms they may contain.

The advantages of this application of hot water are threefold. In the first place, at this high temperature it is antiseptic. Not only it removes such germs as may have entered the wound from contact with the clothing or ground, but it also neutralizes their effect. At 62° C. (145° F.), the development of microbes is checked. Miquel has shown that, when one cubic centimeter of liquid was maintained for fifteen minutes at a temperature of 55° C. (131° F.) the number of bacilli contained therein fell from 3,500 to 33. Moreover, I mix with the water a small quantity of an antiseptic, the potency of which is greatly increased by heat. Further, hot water is hæmostatic, oozing is arrested, and the smaller veins and arterioles contract. But water of a higher temperature than 60° C. helps to compensate for the loss of heat, resulting from the bleeding and especially from the traumatic shock. The dangerous hypothermia gradually gives way, and in the majority of cases under my observation I have found that, when the patient left the operating table, his temperature had already risen to normal, instead of being sub-normal, as is the rule after an amputation has been performed for the purpose of remedying the effects of a traumatism. I need hardly insist upon the improvement in the prognosis under such conditions. When this irrigation has been accomplished, it only remains to have recourse to the process of embalming before referred to.

For many years I have observed the effect of irrigations with hot water in hæmorrhoids, and have invariably found it excellent. I have published numerous cases of timid patients who could not make up their minds to submit to an operation, but contented themselves at each fresh attack with the application to the anal region of gauze compresses dipped in water at 55° C. As, however, the water rapidly loses its heat, it is necessary to dip the compresses in hot water at intervals of a minute and apply them immediately to the cleft of the nates.

In addition to this treatment, the patient must every morning have an injection at the same temperature, observing the rules which I shall lay down later on, in describing my treatment of perimetro-salpingitis. Better results are obtained from these measures in small hæmorrhoids of recent formation, without marked contraction of the sphincter or a perceptible varicose edge. Under such conditions, the hot-water treatment has invariably, in my experience, resulted in lengthening the intervals between the attacks to such an extent as to render the improvement equivalent to a cure. In severe cases, however, with large, prolapsed hæmorrhoids, and contraction and pain of the sphincter, the treatment must be dilatation and extirpation with the knife, followed by the application of catgut sutures to the mucous membrane and skin.

Hot water is particularly efficacious in acute prostatitis. I have published several articles on this subject, although cases of this affection are comparatively rare. The method of treatment is very simple. The canula of an irrigator, filled with water at a temperature of from 55° to 60° C. is introduced into the anus slowly and carefully, in order not to injure the enlarged prostate which projects into the rectum. The tap is opened so as to permit the liquid to gradually escape and bathe the prostate. This treatment is repeated twice a day until complete recovery is obtained. There is almost immediate improvement, and in none of the nine cases under my observation has suppuration supervened, whatever the cause of the prostatitis and the size of the inflamed organ may have been. I have extended it to cases of congestion, which is of frequent occurrence in hypertrophy of the prostate, and I have often successfully combated with a hot enema the paroxysms of re-

tention of urine which, in prostatic patients, follow the slightest excess, fatigue, or chill. It is possible that the regular use of such enemata might render castration unnecessary in some cases in which surgeons nowadays somewhat too readily resort.

The time is now past when apparently well-informed surgeons proposed and practised extirpation of the adnexa for the relief of pain on pressure in the vaginal culs-de-sac, ill-defined infiltration of the region, menstrual troubles, and a sensation of weight in the lumbar region. More than this is now required to justify laparotomy. For my own part, I never operate in the presence of these affections of the true pelvis, before I have had recourse to medical treatment in which hot water enemata constitute the principal factor. The results obtained in this way are so satisfactory that, in my wards at the Pitié Hospital, we only operate on the average on one out of three patients admitted for undoubted oöphoro-salpingitis.

I begin by disinfecting the vagina and uterus, followed by dilatation of the cervix and prolonged drainage of the uterus, packing, and, if necessary, curetting the uterine cavity, the walls of which I treat repeatedly with topical applications, such as tincture of iodine, creosote, and graduated solutions of zinc chloride. These manœuvres have been so often described, that there is no necessity for repeating, except in so far as my method differs from that of other surgeons. Though it is not unusual to employ hot water, this water is not, as a rule, hot enough, the temperature ordinarily being from 40° to 45° C. whereas I use water of at least 50°, and still more frequently 55° C. The principal difference, however, is that, while other surgeons have recourse to vaginal irrigations, I employ enemata for this purpose.

Not that I entirely disapprove vaginal injections, their utility in cleansing the vagina cannot be despised; but it must be remembered that this is about all the benefit to be derived thereform, and these have little, if any, modifying effect on congestion of the uterus and its appendages. Their use rests on an anatomical error, for, if it is desired to reach the uterus, ovaries, and oviducts, the operation must be carried out through the rectum. An enema results in the accumulation of hot water in the ampulla of the rectum, into which the internal genital organs project. Enemata must, therefore, be resorted to under these conditions. They are best administered in the morning, about half an hour before rising. The irrigator, filled with water at a minimum temperature of 55° C., is placed on the night-table, the canula is introduced above the sphincter, and the tap is slowly opened, so that only a small quantity of liquid passes into the intestine, the slowness of the process preventing contraction of the muscular coat. In this manner a much larger quantity of water can be introduced than if a strong jet be turned on at once. Should a desire to defæcate manifest itself, the water is shut off until this desire has passed, after which the tap is again slowly opened. The patient should retain the enema for half an hour if possible. Then she is allowed to evacuate the liquid, repeating the operation the next morning.

By this antiseptic treatment, drainage of the uterus, and hot enemata, I have succeeded in relieving, and even curing, a large number of cases of perimetro-salpingitis. The infiltration of the culs-de-sac disappears, the peristaltic movements of the intestine break down the adhesions, and, instead of large masses filling up the true pelvis, the exudations and purulent collections are absorbed, the vaginal culs-de-sac become supple, the uterus movable, and the region in question resumes almost its normal condition, especially after judicious and moderate application of massage. I have on many occasions seen the tumor entirely disappear, and this result was in a large measure attributable to the use of hot water, which is of the greatest value in surgery.

A gentleman once asked a lawyer what he would do provided he had loaned a man $500, and the man had left the country without sending any acknowledgments.

"Why, that's simple; just write him to send an acknowledgment for the $5,000 you lent him, and he will doubtless reply stating it was only $500. That will suffice for a receipt, and you can proceed against him if necessary."

CURRENT LITERATURE CONDENSED.

Hemorrhagic Diathesis.[1]

A young man, aged twenty-four, apparently in good health, father having died several years ago of consumption, mother in good health, presented himself for treatment. He had been cured of a recent attack of gonorrhœa and wished treatment for phymosis. I circumcised him and although no hemorrhage of importance occurred at that time, I was sent for at night and found that he had awoke from sleep with his clothing saturated with blood. There were no bleeding arteries, but several points of the cut surface were oozing. These resisted cold and many styptics, and finally yielded to actual cautery. The next night the same condition occurred from other points and received the same treatment. This continued for five or six nights, until almost the entire cut surface had been burned. Since then I have attended the same man for hemorrhage from very trifling cuts. He came very near bleeding to death after the extraction of a tooth, having failed to notify the dentist of his peculiarity. This disease occurs in different members of families, more often males than females. The second case was a nephew of the first, and about ten years of age. I was first called to see him at night to relieve epistaxis, caused by a blow received some hours before. He had lost so much blood that he was in a fainting condition. Styptics failed, and I had to tampon both anteriorly and posteriorly; after which the boy made an uninterrupted recovery. A few weeks later I saw the same boy, after the extraction of a tooth. Hemorrhage was trifling until five or six hours after the operation. In this case I was finally forced to wrap cotton around a small pine wedge and drive it into the cavity to control the hemorrhage. On another occasion I had to apply the actual cautery to a small cut on this boy's lip made by a blow against a tooth.

In all cases there seems to be an unnatural fluidity to the blood, apparently due to deficient fibrin and corpuscles. This increases until the effused blood scarcely stains the bandages. The hemorrhage often does not occur until some hours after the receipt of the injury, making it appear that the shock of operation or of injury may sufficiently contract the capillaries until reaction takes place.

[1] Dr. Pritchard, *Journal of the Medical Sciences*, January, 1896.

A Case of Acne Varioliformis.[2]

A colored man, aged twenty-eight years, presented himself for treatment for an eruption on his face. He has a moderate seborrhœa oleoso, and the skin on the face is somewhat thickened. We can find no comedones, but scattered over the forehead, among the hair, and about the glabella are pustules and papules, each surrounded by more or less inflammation, and here and there deep pits in greater or less contraction. Some of the scabs are cupped, but they are generally flat. Upon removing some of these, we expose well-defined pits, showing that the epidermis and a part of the corium have been destroyed. We see also evidence of scratching. The patient has worked as a hostler, and two weeks ago noticed some lumps on his forehead which he thought were caused by shaving his head. He complains of burning and itching, and gives no history of syphilis, and shows no scar of a primary sore. Diagnosis is based on the facts that acne varioliformis usually selects the forehead, though it may occur all over the face; the scales tend to cause pocks and pitting, and we can exclude syphilis.

A Unique Case.[3]

I delivered a woman of a living child by the use of forceps. The infant was a boy, weighing twelve pounds. Profuse hemorrhage set in after the expulsion of the placenta, and, after controlling this, the nurse called my attention to the child, which, she said, was bleeding to death. I found a ruptured spina bifida, from which blood and cerebro-spinal

[2] Arthur Jordan, M.D., D.D.S., *Virginia Medical Monthly*, February, 1896.

[3] Edwin T. Hosford, M.D., *Tri-State Medical Journal*, January, 1896.

fluid were oozing freely. I applied an antiseptic compress. Careful examination showed spina bifida, hydrocephalus, and talipes varus. The child was paralyzed from the hips down and lived forty-eight hours, passing urine from the ruptured spina bifida, but passed no feces.

Post-mortem examination showed only seventeen vertebræ, the lower seven coalesced and resembling the sternum in shape, and measuring four and one-half by two and one-half inches. There were no lateral arches or spines. The spinal cord bifurcated at the seventh cervical vertebra, one branch running outside and along the vertebral column; the other passing through the thorax, piercing the diaphragm and uniting again opposite the lower edge of the external opening of the spina bifida. No cuticle covered the external tumor, the ruptured sac being formed of the meninges. The bladder was immediately connected with the opening, and its contents would pass out when the body was raised. The urethra was absent. There was very little spinal curvature. The occipito-frontal diameter of the head was eight and one-half inches; the circumference, twenty-one inches. The other organs were normal. The child refused nourishment, and, with the exception of the hydrocephalic cry, lay quietly until death. Examination of the brain was not allowed.

Primary Epithelioma of the Upper Lip and Scirrhus Carcinoma of the Male Breast.[4]

These affections are somewhat rare, and the one here reported is the first primary epithelioma of the upper lip which I have seen.

A farmer, forty-seven years old, gave the following history: His father died, aged forty-seven, of some chronic lung affection; his mother died, aged seventy, from pneumonia; two sisters in infancy, and another during child-birth. His only brother is living and well. There is no family history of carcinoma. He has led an active, laborious life as a farmer, is an inveterate smoker of pipes and cigars, and twenty years ago chewed excessively; not since. In August he cut his upper lip on a broken tooth. Bleeding was inconsiderable, and he paid no attention to the trouble. The wound, however, grew larger, and produced an offensive discharge.

In October his family physician saw the ulcer, diagnosed epithelioma, and brought the man to me. The ulcer occupied the entire upper inner surface to the attachments to the upper jaw, and the lymphatics at the left angle of the jaw were enlarged and tender. The growth was thoroughly removed together with the enlarged glands, and primary union took place in the wound. The diagnosis was confirmed microscopically, and it was interesting in examining the glands to find that the first seemed to have appropriated the carcinomatous cells, while the second seemed inflamed from proximity to its neighbor. No enlargement could be found on the right side, but two weeks later a tender gland was removed from that side and found infiltrated with "bird's-nests," and also pus, and pus-producing organisms.

A manufacturer, aged fifty-one, presented himself, complaining of a hard mass in the left breast, above and internal to the nipple. He can recall no injury nor irritation. His family history is good, and no relative has suffered from carcinoma. The mass appeared a year ago, and has since increased, without pain. Four months after its first appearance, a scab formed over the most prominent part of the tumor, and frequently fell off, leaving a bleeding surface. Of late the bleeding has been considerable. The man is pale, but not cachectic. The entire breast and pectoral muscle, beneath, were removed down to the ribs, and the axillary glands also. Recovery was uneventful, except for persistent oozing from the deep sutures. The tumor was microscopically scirrhus carcinoma, but the axillary glands were simply hypertrophied, without evidence of carcinoma.

[4] C. B. Parker, M.D., *Cleveland Medical Gazette*, January, 1896.

The English Government in India collects about $35,000,000 a year from the sale of opium. This is an interesting fact in connection with the psychology of recent arguments by English statesmen that the moderate consumption of opium is good for the health and morals.—*New York World.*

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PHILADELPHIA, SATURDAY, FEBRUARY 29, 1896.

EDITORIAL.

"HOLDING" PATIENTS.

From time to time we have been favored with glimpses at the means used by some physicians to retain their hold on patients. We were particularly surprised at the many expressions of lack of confidence in, or of half-hearted allegiance to, a man of large experience who had accumulated a considerable fortune by medical practice. In case after case, it was made apparent that his hold upon patients was not based upon their appreciation of his services, nor even upon a personal affection; yet in some way, which we cannot comprehend nor adequately describe, he had succeeded in training a large clientele to the habit of coming to him for medical advice.

Some years ago, while patients were by no means as frequent as might have been desired, we were taught a lesson by a blacksmith. "Our" horse was being shod, and during the operation a man drove up and demanded that immediate attention be given to his own animal. The blacksmith responded that each customer must take his turn. The man then threatened to withdraw his trade. As we were in no hurry and did not wish to be a source of loss to a hard-working mechanic, we rather urged him to accede to the demand, un-

reasonable as it was. This, however, the blacksmith refused to do, and addressing the man with invectives above the melting point of type, he made use of this expression: "I lived before ever I saw you." In a sense, we have adopted those words as a motto in dealing with those who, in professional or business relations, have shown a disposition to be unreasonable and exacting. Better poverty with manly independence than riches bought with self-respect. Better a few patients who come voluntarily, and whose every visit is a tribute to the medical attainments and manly qualities of their physician, than a horde of dollar-bringers held by obsequiousness, by a carefully cultivated sense of obligation, or by allurements on a par with the chromos of the tea-store.

One of the saddest examples of the mockery of a *successful* life is the physician of an aristocratic circle, constrained to accept offices of trust and obligation, and to observe the niceties of ritual in a church to the cardinal doctrines of which he could not conscientiously subscribe. We may well imagine that the Devil smiles his broadest smile when the man who joins the church for the sake of the money there is in it, is the doctor. The man who has aristocratic patients as a matter of accident or of natural position in life, is not to be sneered at. The one who has worked up to such a practice by attendance on fairs, school commencements and other semi-social functions, by seeking church and club associations, is an abnormality at once pitiable and amusing.

We knew a physician of considerable merit and with the native tact and manners of the best society, who sought practice in an unfashionable part of the city, among comparatively poor people.

"Why do you not seek a better class of patients?" we once asked him.

"Because I am better off with those I have," was the response. "I can start out after my office-hour, make a round of calls within a comparatively short distance of my office, stay a few minutes in each place, and collect a dollar for every visit. If I had a society practice, I should be compelled to be more careful in many details of dress and equipage; I should be expected to make a semi-social call at every house unless the patient was dangerously ill; to play with the baby, if there happened to be one; to ask how Miss Mamie was getting on with her music; in short, to keep track of the social history of the entire family. For all this extra trouble, expenditure of time and indirect expenditure of money, I should get just one dollar more than I do now."

Without entirely agreeing with the speaker, we believe that there is an element of truth in his argument, and that the net profits of the man who must constantly exert himself to hold a society practice are little, if any, greater than of the more humble visitant of poorer homes. Certainly the physician who treats people of prominence is subject to severer criticism if his treatment is unsuccessful; through fear of giving offense he must pursue a rigidly accurate policy, and he is limited in the freedom of taking vacations.

The law very properly discriminates between the mutual obligations of physician and patient, forbidding the former to discharge the latter without his consent, while the patient may dismiss his attendant without any reason whatever. In our opinion, the self-respecting physician should go further than the statute law and make his patients feel absolutely free to leave him at any time without disturbing the social, business, or other relations that may happen to

exist between them. Only in this way can he feel sure of that confidence which is one of the main elements of successful treatment. The petty jealousies that not a few of our profession show at any change of preferment, the reluctance with which they relinquish any of their clientele to the care of a specialist, or with which they even consent to the employment of a consultant, all point to a cupidity which not only casts discredit on the medical profession as a whole, but which reacts to the detriment of the very man who seeks "trade" with such eagerness.

We believe that the physician should be ever ready to exert himself for the welfare of his patients, and to show himself to be not only a paid attendant but an accommodating friend; but he should draw the line sharply at any attempt to impose upon his good nature, and he should refuse absolutely to cater to the caprice or false pride of those who employ him. Patients are not slow to detect the motives of a man whose every action seems to say, "I cannot let you go. I cannot afford to lose a single office-call or visit, nor to give anyone else a chance by being absent from my work." Of such a man, one naturally, though sometimes incorrectly, infers that his very anxiety for patronage—the word is rightly used in his case—shows that he does not merit it by professional attainments.

CORRESPONDENCE.

TRIPLE GLANS.

ED. MEDICAL AND SURGICAL REPORTER:

The possessor of this anomaly, a healthy-looking German, unmarried, thirty-eight years old, weighing 175 pounds, applied for treatment for gonorrhœa. The penis was small and the prepuce redundant. Retracting the prepuce a curious state of affairs was seen. The meatus was round and completely on the under side. The frenum was broad and formed a bridge under which a probe could be passed with ease. On the right side was a supernumerary glans one-third inch from side to side, and one-fourth inch from before backward. At the junction of the inner and middle third was a linear depression, marking where the meatus should have been.

Entering a probe under the right border of the frenum and passing it on until the point was in line with this depression, and then directing it backward it passed one and one-eighth inches parallel with the urethra to where the canal ended in a blind cul-de-sac. On the left of the frenum was another glans a little more than one-half as large as that on the right side, but it lacked both the linear depression for the meatus and the accessory urethra. Looked at from above and behind, it was an exact miniature of the main glans. Gonorrhœal discharges exuded from both urethræ, but there was no opening between them. The patient declined to enter into negotiation for sale of the specimen, nor would he allow a drawing to be made of it. His statement that all the deviations were congenital was undoubtedly correct.

F. R. MILLARD, M. D.

San Diego, Cal.

The Queen of Portugal has just terminated her second year's study of medicine, and has passed her examinations before the Faculty of Medicine at Lisbon. Queen Amelie does not intend to practice; she means simply to affirm the right of women to intellectual studies.

ABSTRACTS.

THE RÖNTGEN DISCOVERY.*

On January 4, Prof. Wilhelm Conrad Röntgen made a preliminary communication to the Würzburg (Bavaria) Physico-Medical Society, in which he described some recent experiments with vacuum tubes, and made some tentative deductions as to the nature of the "rays" obtained. The paper is printed nearly in full below. The reports of the discovery received by the American daily papers were largely sensational and inaccurate, and while there was a mass of comment in the press at the time, it was very superficial in character, owing to the meagre information that had been received. It was therefore not until the last of January that the discussion began to assume definite shape. Since that time Prof. Röntgen's results have been confirmed in all essential details by A. A. C. Swinton and Prof. S. P. Thompson, of London, Professors Klupathy, of Pesth, Domalip, of Prague, Czermak, of Gratz, Mosetig and Neusser, of Vienna, Lannelongue, of Paris, Wright, of Yale, Pupin, of Columbia, Trowbridge, of Harvard, Goodspeed, of Pennsylvania, Mr. Edison, and many others here and abroad. Many experiments have also been conducted with a view to practical application of the discovery, some results of which are detailed below.

PROF. RÖNTGEN'S STATEMENT.

(1) A discharge from a large induction coil is passed through a Hittorf's vacuum tube, or through a well-exhausted Crookes's or Lenard's tube. The tube is surrounded by a fairly close-fitting shield of black paper; it is then possible to see, in a completely darkened room, that paper covered on one side with barium platino-cyanide lights up with brilliant fluorescence when brought into the neighborhood of the tube, whether the painted side or the other be turned toward the tube. The fluorescence is still visible at two meters distance. It is easy to show that the origin of the fluorescence lies within the vacuum tube.

(2) It is seen, therefore, that some agent is capable of penetrating black cardboard, which is quite opaque to ultra-violet light, sunlight, or arc-light. It is therefore of interest to investigate how far other bodies can be penetrated by the same agent. It is rapidly shown that all bodies possess this same transparency, but in very varying degrees. For example, paper is very transparent; the fluorescent screen will light up when placed behind a book of a thousand pages; printers' ink offers no marked resistance. Similarly, the fluorescence shows behind two packs of cards; a single card does not visibly diminish the brilliancy of the light. So, again, a single thickness of tin-foil hardly casts a shadow on the screen; several have to be superposed to produce a marked effect. Thick blocks of wood are still transparent. Boards of pine two or three centimetres thick absorb only very little. A piece of sheet aluminum, 15 mm. thick still allowed the X-rays (as I will call the rays, for the sake of brevity) to pass, but greatly reduced the fluoresence. Glass plates of similar thickness behaved similarly; lead glass is, however, much more opaque than glass free from lead. Ebonite, several centimetres thick, is transparent. If the hand be held before the fluorescent screen, the shadow shows the bones darkly, with only faint outlines of the surrounding tissues. Water and several other fluids are very transparent. Hydrogen is not markedly more permeable than air. Plates of copper, silver, lead, gold, and platinum also allow the rays to pass, but only when the metal is thin. The salts of the metal, either solid or in solution, behave generally as the metals themselves.

(3) The preceding experiments lead to the conclusion that the density of the bodies is the property whose variation

*From *Public Opinion.*

mainly affects their permeability. At least no other property seems so marked in this connection. But that the density alone does not determine the transparency, is shown by an experiment wherein plates of similar thickness of Iceland spar, glass, aluminum, and quartz were employed as screens. Then the Iceland spar showed itself much less transparent than the other bodies, though of approximately the same density. I have not remarked any strong fluorescence of Iceland spar compared with glass (see below, No. 4).

(4) Increasing thickness increases the hindrance offered to the rays by all bodies. A picture has been impressed on a photographic plate of a number of superposed layers of tin-foil, like steps, presenting thus a regularly increasing thickness.

(5) Pieces of platinum, lead, zinc, and aluminum foil were so arranged as to produce the same weakening of the effect. The annexed table shows the relative thickness and density of the equivalent sheets of metal.

	Thickness	Relative thickness	Density
Platinum	.018 mm.	1	21.5
Lead	.050 "	3	11.3
Zinc	.100 "	6	7.1
Aluminum	3.500 "	200	2.6

From these values it is clear that in no case can we obtain the transparency of a body from the product of its density and thickness. The transparency increases much more rapidly than the product decreases.

(6) The fluorescence of barium platino-cyanide is not the only noticeable action of the X-rays. It is to be observed that other bodies exhibit fluorescence, *e. g.* calcium sulphide, uranium glass, Iceland spar, rock-salt, etc. Of special interest in this connection is the fact that photographic dry plates are sensitive to the X-rays. It is thus possible to exhibit the phenomena so as to exclude the danger of error. I have thus confirmed many observations originally made by eye observation with the fluorescent screen. Here the power of the X-rays to pass through wood or cardboard becomes useful. The photographic plate can be exposed to the action without removal of the shutter of the dark slide or other protecting case, so that the experiment need not be conducted in darkness. Manifestly, unexposed plates must not be left in their box near the vacuum tube. It seems now questionable whether the impression on the plate is a direct effect of the X-rays, or a secondary result induced by the florescence of the material of the plate. Films can receive the impression as well as ordinary dry plates. I have not been able to show experimentally that the X-rays give rise to any calorific effects. These, however, may be assumed, for the phenomena of fluorescence show that the X-rays are capable of transformation. It is also certain that all the X-rays falling on a body do not leave it as such. The retina of the eye is quite insensitive to these rays: the eye placed close to the apparatus sees nothing. It is clear from the experiments that this is not due to want of permeability on the part of the structures of the eye.

(7) After my experiments on the transparency of increasing thicknesses of different media, I proceeded to investigate whether the X-rays could be deflected by a prism. Investigations with water and carbon bisulphide in mica prisms of 30° showed no deviation either on the photographic or the fluorescent plate. With prisms of ebonite and aluminum, I have obtained images on the photographic plate, which point to a possible deviation. It is, however, uncertain, and at most would point to a refractive index 1.05. No deviation can be observed by means of the fluorescent screen. Investigations with the heavier metals have not as yet led to any result, because of their small transparency and the consequent enfeebling of the transmitted rays. On account of the importance of the question it is desirable to try in other ways whether the X-rays are susceptible of refraction. Finely powdered bodies allow in thick layers, but little of the incident light to pass through, in consequence of refraction and reflection. In the case of the X-rays, however, such layers of powder are for equal masses of substance equally transparent with the coherent solid itself. Hence we cannot conclude any regular reflection or refraction of the X-rays. It is, hence, obvious that lenses cannot be looked upon as capable of concentrating the X-rays; in effect, both an

ebonite and a glass lens of large size prove to be without action. The shadow photograph of a round rod is darker in the middle than at the edge; the image of a cylinder filled with a body more transparent than its walls exhibits the middle brighter than the edge.

(8) The preceding experiments, and others which I pass over, point to the rays being incapable of regular reflection. It is, however, well to detail an observation which at first sight seemed to lead to an opposite conclusion. I exposed a plate, protected by a black paper sheath, to the X-rays, so that the glass side lay next to the vacuum tube. The sensitive film was partly covered with star-shaped pieces of platinum, lead, zinc, and aluminum. On the developed negative the star-shaped impression showed dark under platinum, lead, and, more markedly, under zinc; the aluminum gave no image. It seems, therefore, that these three metals can reflect the X-rays; as, however, another explanation is possible, I repeated the experiment with this only difference, that a film of thin aluminum foil was interposed between the sensitive film and the metal stars. Such an aluminum plate is opaque to ultra-violet rays, but transparent to X-rays. In the result the images appeared as before, this pointing still to the existence of reflection at metal surfaces. If one considers this observation in connection with others, namely, on the transparency of powders, and on the state of the service not being effective in altering the passage of the X-rays through a body, it leads to the probable conclusion that regular reflection does not exist, but that bodies behave to the X-rays as turbid media to light. Since I have obtained no evidence of refraction at the surface of different media, it seems probable that the X-rays move with the same velocity in all bodies, and in a medium which penetrates everything, and in which the molecules of bodies are embedded. The molecules obstruct the X-rays, the more effectively as the density of the body concerned is greater.

(9) It seemed probable that the geometrical arrangement of the molecules might affect the action of a body upon the X-rays, so that, for example, Iceland spar might exhibit different phenomena according to the relation of the surface of the plate to the axis of the crystal. Experiments with quartz and Iceland spar on this point lead to a negative result.

(10) It is known that Lenard, in his investigations on cathode rays, has shown that they belong to the ether, and can pass through all bodies. Concerning the X-rays the same may be said. Air absorbs the X-rays much less than the cathode rays. In general, other bodies behave like air; they are more transparent for the X-rays than for the cathode rays.

(11) A further distinction, and a noteworthy one, results from the action of a magnet. I have not succeeded in observing any deviation of the X-rays even in very strong magnetic fields. The deviation of cathode rays by the magnet is one of their peculiar characteristics; it has been observed by Hertz and Lenard, that several kinds of cathode rays exist, which differ by their power of exciting phosphorescence, their susceptibility of absorption, and their deviation by the magnet; but a notable deviation has been observed in all cases which have yet been investigated, and I think that such deviation affords a characteristic not to be set aside lightly.

(12) As the result of many researches, it appears that the place of most brilliant phosphorescence of the walls of the discharge-tube is the chief seat whence the X-rays originate and spread in all directions; that is, the X-rays proceed from the front where the cathode rays strike the glass. If one deviates the cathode rays within the tube by means of a magnet, it is seen that the X-rays proceed from a new point, *i. e.*, again from the end of the cathode rays. Also for this reason the X-rays, which are not deflected by a magnet, cannot be regarded as cathode rays which have passed through the glass, for that passage cannot, according to Lenard, be the cause of the different deflection of the rays. Hence I conclude that the X-rays are not identical with the cathode rays, but are produced from the cathode rays at the glass surface of the tube.

(13) The rays are generated not only in glass. I have obtained them in an apparatus closed by an aluminum plate 2 mm. thick.

(14) The justification of the term "rays," applied to the phenomena, lies partly in the regular shadow pictures produced by the interposition of a more or less permeable body between the source and a photographic plate or fluorescent screen. I have observed and photographed many such shadow pictures. Thus, I have an outline of part of a door covered with lead paint; the image was produced by placing the discharge tube on one side of the door, and the sensitive plate on the other. I have also a shadow of the bones of the hand, of a wire wound upon a bobbin, of a set of weights in a box, of a compass card and needle completely enclosed in a metal case, of a piece of metal where the X-rays show the want of homogeneity and of other things. For the rectilinear propagation of the rays, I have a pinhole photograph of the discharge apparatus covered with black paper. It is faint but unmistakable.

(17) If one asks, what then are these X-rays; since they are not cathode rays, one might suppose, from their power of exciting fluorescence and chemical action, them to be due to ultra-violet light. In opposition to this view a weighty set of considerations presents itself. If X-rays be indeed ultra-violet light, then that light must possess the following properties: (a) It is not refracted in passing from air into water, carbon bisulphide, aluminum, rock-salt, glass, or zinc. (b) It is incapable of regular reflection at the surfaces of the above bodies. (c) It cannot be polarized by any ordinary polarizing media. (d) The absorption by various bodies must depend chiefly on their density. That is to say, these ultra-violet rays must behave quite differently from the visible, infra-red, and hitherto known ultra-violet rays.

These things appear so unlikely that I have sought for another hypothesis. A kind of relationship between the new rays and light rays appears to exist; at least the formation of shadows, fluorescence, and the production of chemical action point in this direction. Now it has been known for a long time, that besides the transverse vibrations which account for the phenomena of light, it is possible that longitudinal vibrations should exist in the ether, and, according to the views of some physicists, must exist. It is granted that their existence has not yet been made clear, and their properties are not experimentally demonstrated. Should not the new rays be ascribed to longitudinal waves in the ether? I must confess that I have in the course of this research made myself more and more familiar with this thought, and venture to put the opinion forward, while I am quite conscious that the hypothesis advanced still requires a more solid foundation.

Some time ago the War Department conducted experiments with a view to reducing the weight and bulk of the soldier's rations without impairing their nutritive value. The report is in part as follows: "A company of the Seventh infantry was detailed and furnished with condensed rations, consisting of coffee, soup, bread, and bacon. The coffee and soup were in small tablets, which, when placed in boiling water, were ready for consumption in two minutes. The bread was in small flat cakes, the weight and hardness of a brick, but when moistened swelled out like a sponge. The bacon was compressed and needed only to be warmed in a frying-pan. The soldiers started out with ten days' rations, but the campaign was brought to an abrupt end after four days of 15-mile marches. The food not only did not satisfy the hunger or give strength, but seemed to irritate the stomach." The *Medical Record* remarks, "Thus far the human laboratory, with its multiple, interdependent, and complementary methods, has a monopoly of its own in fixing the proper standards for digestion, assimilation, and subsequent growth. Each of the varied and subtle processes of digestion must necessarily adapt themselves to the construction and functions of an organ that has a purely vital as well as a merely chemical duty to perform."

The deaf man got out of the tramcar on to the other line of rails. "Look out! there's a car coming!" said the conductor. "What?" said the deaf man. "There's a car coming." "What?" The car caught and knocked down the deaf man, and as he picked himself up he said: "I wonder what that fool kept me there talking about."—*Exchange.*

A REPORT ON THE CONDITION OF THE PARTS, FOUND UPON AUTOPSY, SIX WEEKS AFTER BASSINI'S OPERATION FOR HERNIA.*

GEORGE EMERSON BREWER, M.D., NEW YORK.

Owing to the widespread interest which is now being taken by the medical profession in the Bassini operation for the radical cure of inguinal hernia, a report of the condition of the parts involved in such an operation, found upon autopsy, in a patient who had recently submitted to this procedure, was thought to be of sufficient interest to justify the attention of the Section for a few moments.

CASE.—The patient, a man about 48 years of age, was admitted to the surgical wards of the City Hospital early in September last. At entrance he gave an indefinite history of syphilis many years ago, and said that he had been troubled for seven months with a right inguinal hernia, which was treated at first by a truss. Of late, however, the truss caused considerable irritation, and had failed to properly retain the protrusion. Upon examination a right oblique inguinal hernia was found, which, upon standing, distended the scrotal pouch to the size of a large orange. This was easily reduced, and when in this condition the ring could be felt through the scrotal tissues to be large enough to admit the tips of two fingers. Aside from a moderately acute bronchitis, the patient presented no other evidences of disease. He was anxious to be permanently relieved of this trouble, and when told that an operation afforded a fair chance of success, he readily consented. He was, however, advised to wait a week or two, until his bronchitis had subsided. Two weeks later his symptoms had so far been relieved that the operation was decided upon. He was accordingly etherized, and an incision over the neck of the sac was made, dividing the tissues down the aponeurosis of the external oblique muscle. The aponeurosis was next slit from the external ring to a point a little above the internal ring. The sac was then separated and the spermatic cord freed. This was accomplished with considerable difficulty, owing to firm adhesions, and the fact that the structures entering into formation of the cord were widely separated, and extended over a considerable area of the posterior surface of the sac. The sac of the peritoneum was then opened, and found to contain a portion of the small intestine, which was easily reduced. It was then drawn well up, transfixed, ligated by catgut, and cut off. The stump was pushed within the abdominal wall, and the conjoined tendon united to Poupart's ligament by means of three sutures of chromatized kangaroo tendon. The aponeurosis was next drawn together by a continuous suture of fine silk-worm gut, and the skin united. A large sterilized cotton dressing was applied, and the patient placed in bed. No untoward symptoms followed the operation other than a slight return of the bronchial irritation, presumably caused by the anæsthetic. Although the pulse and temperature gave no indication of infection, the dressing was removed on the fourth day. The wound was found to be united throughout, but slight pin-point areas of redness surrounded several of the cutaneous sutures. These were removed, and a wet bichloride dressing applied. At the next dressing the wound was found to have separated near the middle, for a distance of about three-quarters of an inch. Several days later a portion of the fine silk-worm gut, used to unite the aponeurosis, was found apparently separated from the rest, and presenting in the wound. This was removed, the small wound granulated rapidly, and healed without further trouble. A certain amount of induration was felt for some time over the course of the spermatic cord, extending to the testicle. This, however, was not specially tender

* *American Medico-Surgical Bulletin*, February 29, 1896.

to the touch, and completely disappeared after the healing of the wound.

About five weeks after the operation, and after the complete healing of the wound, the patient was suddenly stricken with an incomplete right-sided hemiplegia. This gradually increased, was accompanied by a progressively deepening coma, and finally resulted in his death, seven days after its inception.

Autopsy.—I will report only that portion of the autopsy which had to do with the parts involved in the operation for hernia. Palpation of the inguinal region and scrotum showed a complete absence of the abnormal induration which had existed over the course of the spermatic cord. Only a slight superficial thickening of the tissues remained in the neighborhood of that portion of the wound which had healed by granulation. The abdomen was next opened, and the parts inspected from within. That portion of the peritoneum lining the right inguinal region showed no trace of the operation other than a slight puckering near the internal abdominal ring. Firm pressure gave evidence of no weakness of the abdominal wall. As a result of this pressure, however, a minute drop of whitish fluid was expressed from the center of the small puckered depression, and also a minute fragment of the catgut, which had been used to ligate the sac. The cavity containing this fluid was not larger than the head of a pin. The fluid was collected on a microscopic slide, stained and examined by Dr. Deady, who had charge of the pathological laboratory. He reported that it contained a few leucocytes, a large amount of amorphous detritus, and a number of small shreds, thought to be some remnants of the catgut ligature. No micro-organisms were found.

A careful dissection was then made of the parts, from without inwards. The skin and subcutaneous areolar tissue were found to be moderately adherent to the aponeurosis of the external oblique muscle. The divided aponeurosis had firmly united throughout. At the upper extremity of the wound, a portion of the fine silk-worm gut was seen embedded in the tissues, in an apparently aseptic condition. The floor of the inguinal canal was found to be firm. The arched border of the internal oblique and transversalis muscles apparently united with Poupart's ligament. Between the aponeurosis of the external oblique and the floor of the canal, the vas deferens, spermatic artery, and a number of veins could be seen, apparently healthy, and lying separately. These were traced upward through the artificially made internal ring and downward into the scrotum, becoming more united and apparently bound together as they approached the testicle. None of the kangaroo-tendon sutures could be found, although several small tendinous shreds were embedded in the tissues.

As an opportunity for a careful post-mortem examination of the parts involved in this comparatively simple operation must occur but infrequently, and as the writer has been unable to find any report of such examination, occurring at an early period after the operation, in a case where a complete healing had taken place, it was thought that a brief statement of the result might be of interest.

Management of Children.

A competent nurse says most of children's naughtiness is taught by mother or nurse. "Baby does not cheerfully kiss you. 'See, mamma cry if baby will not kiss her. Boo-hoo!' And mamma makes believe to cry in her hands till baby pulls her fingers away from the deceiving eyes, and mamma laughs and does not always remember when she stops boo-hooing to exact the kiss. Of course by a mere animal process of reasoning baby learns to cry for what it wants. Has it not had the 'line upon line'?

"When baby makes a misstep and down he goes, avoid the Scylla and Charybdis of nursery shipwreck. Neither make a great fuss over the bump and weaken his self-control by too much sympathy, nor do that other miserable thing, strike the offending object of collision, saying, 'Naughty old table. Whip the table for hitting little boy's head.' This is often the first lesson in combativeness, and the baby who hits back the passive chair that is said to have hit him becomes equally active in slapping children or other folk who morally or physically oppose."

RHEUMATIC PAINS IN INFLUENZA.

Dr. Richard Drews (*Centralbl. fur innere Medicin*, No. 47, 1895) contributes an excellent description of the nervous form of influenza as observed in his own practice. Among the chief symptoms complained of were a dull heavy headache, graphically described by the patients "as if the head had been compressed," or "as if the hair was being torn out at once"; a feeling of vertigo or emptiness in the head; more or less severe and protracted mental and physical prostration, and more or less profuse perspiration. Aside from these general symptoms, the most prominent were rheumatic and rheumatoid pains, pains in the back, especially in the scapular and sacral region, violent lancinating pains in the chest and in the region of the heart, in the muscles of the arms and legs, especially the calves, and, in rare instances, even slight paresis of the limbs with diminution of the reflexes, particularly the patellar reflex. In close relation to these symptoms, neuralgias occurred in the course of certain nerves; the supra and infra orbital, the trigeminus, the sciatic and intercostals; this being occasionally associated with herpes zoster. In children and women especially, the author observed a marked acceleration of the pulse, associated with a feeling of anxiety and precordial distress. Cutaneous eruptions were noted in but a few cases, in the form of an erythema, resembling measles or scarlatina, of only a few hours duration, or a severe urticaria or pruritus. Disturbances of the special senses—weakness of sight, diplopia, diminished hearing, tinnitus, diminution or perversion of taste, etc., were also experienced. Owing to the resemblance of the pains in the neuralgic type of influenza to those of acute muscular rheumatism, Drews was led to try salicylate of sodium, which gave good results, especially in cases unattended with gastro-intestinal disturbances. In some cases in which digestive troubles existed the effects were much less favorable. The gastro-intestinal irritation being increased and the unpleasant symptoms of salicylic acid intoxication being exhibited after administration of comparatively small doses. For this reason he resorted to salophen, which he found even more efficient than the salicylate, while devoid of its disagreeable after effects. The greater efficiency of salophen is attributable to the fact that the salicylate acid, which is one of its components, is liberated in the intestinal canal, and being in the nascent state acts more promptly and reliably than salicylic acid administered by the mouth. In the sudden violent attacks of neurotic influenza it is the author's custom to give to adults an initial dose of 30 grains salophen and then 15 grains at intervals of two or three hours ($\frac{7}{10}$ grains pro die). If the symptoms are less intense, and in the case of weakly persons or women, doses of 7 to 10 grains every two or three hours sufficed to rapidly alleviate the neuralgic pains and effect their complete disappearance in two or three days. In children doses of 5 to 8 grains according to age were administered. So satisfactory were the results obtained that Drews has no hesitation in regarding salophen as the ideal remedy for the nervous phenomena of influenza.

Analyses recently conducted by the *Medical Press and Circular*, an English journal, show that certain British cheeses examined contain a much higher percentage both of flesh-forming substances and of fats than meat, even of the finest quality. This view, says *Public Opinion*, London, was held by no less an authority than the late Dr. Parkes, of Netley, who persistently maintained that as cheese contained a very large amount of albuminoid material in a very small bulk it was one of the best foods for soldiers in time of war. Dr. Thudichum, in his recent work, "The Spirit of Cookery," states that cheese "is the most valuable animal food obtainable," and that it is "from two to three times as nutritious as the same money-value of ordinary meat."

The fate of nations depends on how they are fed.

LIBRARY TABLE.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By leading authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In twenty volumes. Volume VI., "Diseases of the Respiratory Organs." New York: William Wood & Company. 1895.

The next volume in sequence should have been the fifth, but, as the publishers announce, it became impracticable to present this owing to unforseen difficulties in the line of delayed manuscripts; so that volume six comes to hand at this date, with the promise that the next to follow shall be the fifth.

The present volume is devoted exclusively to "Diseases of the Respiratory Organs," and presents a full consideration of every possible topic connected with this vast subject, and represents the latest knowledge and achievements of no less than eight recognized authorities upon these specialties.

The only two diseases not treated of in this volume are tuberculosis and croupous pneumonia, which, on account of their now well-established microbic origin, have been left for a later volume, to be placed in correlation with the other infectious diseases.

The respiratory tract has been for convenience divided into eight sections, which are treated of by separate specialists.

The opening article is upon "Diseases of the Nose," by Prosser James, of London, who has presented his views in a graceful, literary style. Next comes "Diseases of the Accessory Sinuses of the Nose," by Jonathan Wright, of Brooklyn. Dr. E. J. Moure, of Bordeaux, a leading French authority, treats of "Diseases of the Pharynx and Naso-Pharynx," in one article, and in a second of "Diseases of the Tonsils." Dr. A. H. Buck, of New York, has devoted his effort to "Ear Diseases," while "Diseases of the Larynx" is handled by F. H. Bosworth, of New York.

Then follows the consideration of the "Trachea and Bronchial Tubes," by the conjoint effort of Thomas Grainger Stewart and George A. Gibson, of Edinburgh; and lastly, but of paramount interest, "Diseases of the Lungs" receive ample consideration from Winslow Anderson, of San Francisco.

The book, as a whole, is a most complete compilation, and may be looked upon as a reliable reference for the general practitioner in treating this most important class of affections which are so markedly prevalent in this temperate zone.

Numerous illustrations throughout the work have been generously introduced to more clearly elaborate the text. W. H. P.

THE YEAR-BOOK OF TREATMENT FOR 1896. A Critical Review for Practitioners of Medicine and Surgery. 12mo., 484 pages. Cloth, $1.50. Philadelphia: Lea Brothers & Co., Publishers. 1896.

Practitioners appreciate the utility of a summary of a year's advances in the various departments of medicine and surgery, and the value of having them in classified form for ready assimilation or quick reference. Twelve issues of this Year-Book attest its usefulness and popularity. Prepared by a corps of editors, each eminent in his assigned department, the volume can be accepted as at once thorough and authoritative. It includes a classified list of the new books, a section on Medical Instruments and Surgical Appliances; Pharmaceutical and Dietetic Novelties, and an Index of Subjects placing anything in the volume instantly at command.

BUFFALO JOURNAL OF PHARMACY.—One of the brightest pharmacy journals and also one of the latest—since the current monthly issue is only the eleventh—is the *Buffalo Druggist*, edited by Mr. Andrew M. Clarke, of Buffalo. Considerable space is given to the work and also to the play of the students of the Pharmacal Department of the University of Buffalo. There follows "Gossip of the Trade," including personal and other items from New York, Pennsylvania, and Ohio. A quotation from Merck's Report mentions the new drug habit of taking chloroform for the sake of the pleasant dreams occasioned, which are compared by habitués to those due to opium, but without the unpleasant after-effects of nausea, constipation and melancholy. The leading article, on the Metric System, is contributed by a member of the staff of the REPORTER. Other editorials are devoted to the consideration of the cut-rate war on patent medicines, and, incidentally, to the present subservience of the druggist to the manufac-

turer of these nostrums. Among the notes that may be of interest to physicians, we glean the following: "Acetyline, the proposed new illuminant, is found, according to experiment by M. Grehant, to be lethal only in a proportion of forty per cent., or even much higher, in air. Cases of fatal gas-poisoning may, therefore, be expected to become more infrequent when the cheap and brilliant light of acetyline is substituted for the present expensive and unsatisfactory product."

THE March Number of *Harper's Magazine* opens with a new instalment of Caspar W. Whitney's "On Snow-Shoes to the Barren Grounds," the most striking and novel narrative of travel given to American readers in recent years. The article is profusely illustrated from sketches and photographs taken on the spot, some of which have served as motives for characteristic drawings by Frederic Remington. Woodrow Wilson continues his papers on George Washington with a sketch entitled "Colonel Washington," showing him in his boyhood and early manhood—as surveyor, and as soldier in the memorable and disastrous campaign of Braddock against the French. One of Howard Pyle's noble illustrations for this paper, "Washington's Retreat from Great Meadows," appears as frontispiece to the Number. "Arcadian Bee-Ranching," by Miss Ninetta Eames, with illustrations, presents a faithful and exceedingly interesting view of an important California industry. Mr. Black's new novel, "Briseis," continues its piquant and romantic social drama in London, with illustrations by W. T. Smedley. In the "Personal Recollections of Joan of Arc" the story of the Great Trial is the principal feature. Owen Wister contributes another of his characteristic Western stories, entitled "Where Fancy was Bred." It is a humorous description of a barbecue, in which Lin McLean and the Virginian are prominent figures. "Jane Hubbs's Salvation," by Helen Huntington, is a strong dramatic sketch of character and incident associated with the work of the Salvation Army. In "The 'Boss' of Ling-Foo" Julian Ralph presents a new aspect of Chinese life, showing that even the serene Middle Kingdom has its political bosses and corrupt machinations. The story is illustrated in C. D. Weldon's best style. The chapters of Poultney Bigelow's "German Struggle for Liberty," superbly illustrated by R. Caton Woodville, increase in interest from month to month.

It is a remarkable characteristic of our most advanced modern machinery that it stimulates the operations of a living organism. This is especially noticeable in the recent applications of electricity. Park Benjamin, in an article entitled "The Nerves of a War Ship," contributed to this number of *Harper's*, develops this feature as illustrated in the delicate and complex internal machinery of an American cruiser, showing how the latest inventions have given its intimate operations an almost psychical character. The Editor's Study, by Charles Dudley Warner, and the Editor's Drawer complete the number.

NEW BOOKS ANNOUNCED.

DONT'S FOR CONSUMPTIVES, OR THE SCIENTIFIC MANAGEMENT OF PULMONARY TUBERCULOSIS is the title of a book which, under the authorship of Dr. Charles Wilson Ingraham, will soon be issued by the Medical Reporter Publishing Co., of Rochester, N. Y.

The work is devoted exclusively to the general management of Pulmonary Invalids, no reference whatever being made to drug treatments.

The object of the author is to supply the physician with a practical work, and at the same time, by eliminating technical terms, reduce the text within the easy comprehension of the intelligent patient. The author claims that "a good understanding of his condition is the best remedy for the consumptive." With this book in the hands of his patient the physician will be relieved of a multitude of details which attach to the successful management of such cases. Special attention has been given those chapters pertaining to the destruction of tubercular infection.

The book will be printed on 72-pound antique book paper, bound in cloth (imitation morocco), with title in gold-leaf. Price, $1.75.

P. Blakiston, Son & Co., of Philadelphia, announce "APPENDICITIS," by John B. Deaver, M.D., Assistant Professor of Applied Anatomy, University of Pennsylvania; Assistant Surgeon to the German Hospital, etc. The book will be arranged in a practical and systematic manner. The History, Etiology, Symptoms, Diagnosis, Operative Treatment, Prognosis, and Complications of this disease

will be given in the order named. It will contain about forty illustrations of methods of procedure in operating, and typical pathological conditions of the Appendix, the latter being printed in colors.

Dr. G. Frank Lydston, of Chicago, has in preparation a book of doctor's stories called "THE TALES OF A TALKATIVE DOCTOR," containing humorous and pathetic sketches. The contents will comprise character sketches from real life; psychological studies; satire of current medical follies; dialect stories and every-day medical philosophy gleaned from the life of a busy doctor, together with the "rhodomontades of a sociable skull."

PERISCOPE.

MEDICINE.

Scarlatina.

Dr. Valli calls attention to the symptom of vomiting occurring at the *début* of scarlatina which he considered of considerable importance in diagnosing at an early hour the affection. It permits also to recognize the malady where the usual symptoms are wanting, or where its evolution is abnormal. The vomiting occurs without any apparent cause and brusquement. The parents will tell how the child, up to then quite well, was seized suddenly, at play, during repasts, or in their sleep, with vomiting, and from that time the little patient became feverish. On examination, the pulse will be found rapid, the temperature high, and the following day the eruption and the sore throat will appear, if the affection follow the normal course. But, as remarks M. Valli, the importance of this vomiting for the diagnosis of scarlatina is the more enhanced in that it is particularly in that form of the malady where the tonsilitis and eruption are absent, that it is met with, consequently the attendant should bear in mind, when called to such cases, the possibility of scarlatina, and make a careful examination of the urine after the fever has subsided, before allowing the patient to leave the bed, and, more especially, to go out.— *Med. Press and Circ.*

Erysipelas.

Dr. Chantemesse has just published a report on the treatment of 501 cases of erysipelas by serum prepared by the Pasteur Institute, with a mortality of only 2.59 per cent. The effects of the serum are both local and general. Locally, at the end of twenty-four hours, a marked decrease of the redness, swelling and pain is observed. Desquamation sets in at an early hour consisting of thick epidermic scales. Sometimes the lesion continues to spread, but is arrested by repeated injections. Suppuration is very rare, and where it existed before the treatment it is considerably diminished by the injections.

The general condition of the patient improves rapidly a few hours after the injection; if the dose is sufficient the patient experiences a *bien etre* well marked; the nervous disturbance and particularly the delirium are favorably influenced. The fever abates rapidly to disappear altogether at the end of the second day, while the pulse diminishes in frequency and increases in strength. Where albuminuria has already set in, the injections cause it to disappear within forty-eight hours. The gravity and the duration of the affection are diminished by the serum treatment. The ordinary dose of serum varies between six and ten drachms.—*Med. Press and Circ.*

Treatment of Slow Pulse.

Dr. Debore recommends in the treatment of slow pulse, where the phenomenon provokes different grave manifestations, such as vertigo, syncope, epileptiform seizures, uræmia, etc., subcutaneous injections of a one per cent. solution of nitro-glycerine as follows: solution 30 to 40 drops, distilled water two drachms and a half. Three-fourths of the syringe are injected daily until all danger disappears. The treatment is followed up by the internal administration of caffeine, sulphate of sparteine, or other cardiac tonics.—*Med. Press and Circ.*

The Treatment of Asthma by a Strict Milk Diet.

Huchard (*Semaine Medicale*) reports a number of successes in the treatment of cases wrongly called neuropathic or reflex asthma by the use of a strict milk diet. He has found the same regimen of great benefit in cardiac cases with nocturnal paroxysms of dyspnœa. He considers the dyspnœa in these cases to be due to ptomaines that find their way into the sluggish circulation and poorly oxygenated blood from the alimentary canal. He has found it only necessary to interrupt the strict milk regimen and resume a mixed diet to cause the paroxysms to recur. He has found that the milk (about three litres per twenty-four hours) must not be all given during the day, but about a litre of it in the evening and one-half litre during the night. There is a

question whether the same results may not be obtained by the use of intestinal antiseptics in such patients as are unable to bear the strict milk diet. Huchard seems to incline to the opinion that all nervous asthmas are of toxic origin and due to ptomaines absorbed from the intestinal tract.—*Univ. Med. Mag.*

Sic Transit Gloria Mundi.

The glory of the Klebs-Lœffler bacillus is passing away. The culture test, which was to supersede the clinical observation of the disease, and upon which the diagnosis of diphtheria was to be made, has proven a flat failure, and the New York Board of Health has dropped from its circular, announcing the result of the bacteriological examination, "the case is therefore one of true diphtheria," when the Klebs-Lœffler bacilli are found. We understand that another step forward has also been made, and that now no patients are sent to the hospital unless the clinical manifestations of the disease are present to corroborate the bacteriological report. It is only a question of time when the bacteriological investigation will be dropped and another fad will have come to an ignominious end.—*Pittsburg Med. Rev.*

Use of Antitoxic Serum for Prevention of Diphtheria.

In concluding a paper on this subject (*Medical News*, November 30), Dr. Hermann, Biggs, of New York, states that of 1,014 persons immunized, bacilli having been found in their throats, sixteen cases of diphtheria occurred—three in from one to thirty days, and thirteen in from thirty to one hundred and ten days after immunization.

The Dietetic Treatment of Chronic Heart Diseases.

Glax (*Wien. med Presse*) says that for fifteen years he has insisted on the importance of restricting the amount of liquor ingested by patients with heart disease. Such a restriction, he says, often alone suffices to bring about compensation, and in many cases in which such drugs as digitalis are beginning to lose their power, it is restored by making the liquid ingesta correspond to the excretion.—*N. Y. Med. Jour.*

Bicarbonate of Soda in Colds.

Dr. L. Duncan Bulkley, in *Medical Record*, January 18, relates his experience in the treatment of colds by the administration of bicarbonate of soda. This use of the remedy he discovered accidentally. When suffering from a cold he took some of the alkali for stomach acidity. In a short time he repeated the dose, and found that the cold was greatly relieved as well as the acidity. On other occasions he tried it upon himself and others, and finds it of the greatest service. His method of employing the bicarbonate is to give twenty to thirty grains to an ordinary adult every half-hour, in about three ounces of water, until three doses are given, and then a fourth dose in an hour. In two or three hours the course of four doses may be repeated if the cold is not broken up. He has very seldom found it necessary to administer a third course of four doses. In the influenza type of colds he orders five to ten grains of phenacetine with ten to twenty grains of soda bicarbonate in powders. One of these is taken every two hours in hot water for a day or two.

OBSTETRICS.

Funis Coiled Eight Times Round the Fœtus.

Wygodzky (*Centralbl. f. Gynak.*, No. 48, 1895, finds that the greatest number of coils of the umbilical cord ever found to encircle a fœtus are seven (Baudelocque), eight, (Crede), and nine (Muller and Gray). His own case was observed this year in Wilna. The patient was a primipara, aged twenty. The last period was seen on May 10, 1894. On February 19th the fœtal movements suddenly ceased. On the 20th, pains set in about two weeks before term. At noon, turbid liquor amnii escaped. At 2 P. M., on examination, Wygodzky defined a dead fœtus in left occipito-anterior presentation, in the inlet, very high. The os was nearly completely dilated, the pains strong. By 4 P. M. the head was hardly engaged in the pelvic cavity. At 7 P. M. it neared the outlet at the height of each pain, but retracted immediately afterwards. After 10 P. M. the pains grew weak. At midnight Wygodzky delivered the dead child by expression. Not till then was the cause of delay clear. The funis was very tense and coiled seven times round the neck and once round the left shoulder; there was also a distinct knot. It measured over sixty-five inches in length. The fœtus was a male, slightly macerated. It weighed over five pounds, and was easily delivered entire after division and unwinding of the funis. No marks remained on the neck. The placenta followed ten minutes later, and, as far as naked-eye experience could indicate, it seemed healthy.

Pregnancy and Small-Pox.

Van der Willigen (*Nederland. Tijdschr. voor Geneesk.*, No. 11, 1895) in closely observing 432 cases of small-pox in women under fifty, made particular note of eighty who were pregnant. Of these, 15 per cent. died, whilst the mortality of the non-pregnant cases was 11.08 per cent. Van der Willigen, like some previous authorities, finds that pregnancy increases the predisposition of a patient to the graver forms of variola. In the eighty cases, confluent small-pox was seen in four, and hemorrhagic

in six cases; all the ten died. In the 352 non-pregnant cases the confluent form was observed in three, and the hemorrhagic in eleven patients; 2 of the confluent cases recovered. Two pregnant women died of milder forms; of the total, twelve, there died five undelivered, and most of the others very shortly after birth without any trace of puerperal infection. Of the primiparæ, 9 per cent. died, of the multiparæ 17.25 per cent. 6.25 per cent. of women attacked by small-pox early in pregnancy died, whilst the mortality of those who were infected later amounted to 20.83 per cent. Abortion or premature delivery was noted in twenty-three of the eighty cases during the course of the attack of small-pox. In six the same took place after convalescence from the disease; sixteen children were delivered alive in cases where the small-pox was still in progress, eight at term, and eight prematurely; only three lived longer than six months. Several died of variola; two were clearly born with it.

NEWS AND MISCELLANY.

A Medico-Legal Case.

A Medico-legal case that took a somewhat curious turn was heard in one of the local courts lately, in which a young medical practitioner of Spandau, who became qualified in 1892, was accused of causing bodily injury through negligence. In April of last year, a young woman recently married, presented symptoms of threatened abortion. She consulted two medical men who agreed as to her condition. She then placed herself under the care of the accused, who declared that a harmless operation was necessary. This she consented to, and the operation was performed, with the result that the patient died of hæmorrhage two and a half hours afterwards. What the operation was is not clear, but it appears to have been a curettement of the uterus, in the course of which perforation of the walls of the uterus took place. As a result of the post-mortem examination, Dr. von V—was accused of culpable negligence. The two principal medical witnesses were the Kreisphysikus Dr. Reinicke and Prof. Landau. Whilst Dr. Reinicke laid the whole of the blame on the accused, Prof. Landau laid it on the present state of scientific knowledge and the defective clinical training of students. Operations such as the one in question were not taught practically to young practitioners, and they had to gain their experience from their patients. Moreover, science followed the fashions, and there was a widely-spread school that had given up the plan of observation and waiting, and taught a method of treatment that the witness must characterize as brutal, and must, therefore, lead to brutal consequences. The accused appeared to belong to this modern school; the woman was, therefore, not the victim of his negligence, but the victim of the modern tendency of medicine. The Court then requested a written opinion on the matter from Dr. Landau, and at the same time a control opinion or Obergutachten, from the Royal Medizinal Collegium. It is well to bear in mind that Prof. Landau is not an ordinary professor of gynæcology in charge in either of the teaching clinics, but a professor extraordinary, with a privilege of private teaching.—*Med. Press and Circ.*

Dr. Hiram Corson, who had partially recovered from a late illness, is again in a serious condition. Dr. Corson is thought to be the oldest practicing physician in the United States, and was graduated from our Medical School in '28. He has lived and practiced at Plymouth Meeting, Montgomery County, Pa., during his entire lifetime.

The English Language Excluded.

The official announcement states that the Twelfth International Medical Congress will be held in Moscow, opening on Thursday, August 19th, and that "papers may be read and discussed in the meetings of the sections in French, German or Russian." The *Medical Record* considers this a peculiar and insulting provision which will destroy all further interest in this Congress for English-speaking physicians.

Balling Hoofs.

One of the troubles doctors—especially country practitioners—have to contend with, is the balling of the hoofs of their steeds with snow. A Detroit medico announces that he has discovered a remedy therefor in glycerin, which is applied to the under side of the hoofs and to the shoes just prior to leaving the stable.—*Medical Age.*

The Retort Pertinent.

A young physician who has just established himself, and with very little practice, is noted for his braggadocio. One of the older physicians meeting him on the street the other day, asked how he was coming on. "I have got more than I can attend to," was the boastful reply. "I had to get out of my bed five times last night." "Then why don't you buy some insect powder?'—*Omaha Clinic.*